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EXAMINER HUYNH, SON P				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

Office Action Summary

Application No.

10/008,581

Applicant(s)

RUSS ET AL.

Examiner

SON P. HUYNH

Art Unit

2424

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 114-180 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 114-180 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/18/2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to amended claims 1-16, 114-180 have been considered but are moot in view of the new ground(s) of rejection.

With respect rejection of claims 114-130 under 35 U.S.C 112, second paragraph, Applicant argues the preamble of independent claim 114 provides antecedent basis by reciting "[a] master set-top terminal (STT)" (page 17, paragraph 3). The Examiner agrees that the preamble recite "[a] master set-top terminal (STT)". However, amended claim 114, line 11, also recites "a remote STT". Therefore, it is not clear whether "the STT" in lines 13-14 refer to "[a] master set-top terminal (STT)" in the preamble or "a

remote STT" in line 11. Therefore, there is insufficient antecedent basis for "the STT" in lines 13-14 of amended claim 114.

With respect to rejection of claims 148-164 under 35 U.S.C 101, Applicant argues claims 148-164 does comply with 101 since it recites functional descriptive material recorded on a machine-readable medium (pages 1—18). This argument is respectfully traversed.

M.P.E.P 2106.01(I) states "Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such

claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer- readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions."

In this case, claim 148 recites "a computer readable medium encoded with computer executable instructions **operable** in a set top terminal (STT)" does not necessarily define structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized. For example, when the computer readable medium encode with computer executable instructions is not implemented in the computer and/or not being executed by a processor, computer program's functionality is not be realized. Thus, the claimed subject matter "a computer readable medium..." is not statutory.

Claims 17-113 have been canceled.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 114-130, 169-172 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 114 (lines 13-14) recites the limitation "the STT". There is insufficient antecedent basis for this limitation in the claim. It is unclear whether "the STT" refers to "a master set top terminal (STT)" in the preamble or "a remote STT" in line 11.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 166-167, 170-171, 174-175, 178-179 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 166, 170, 174, 178 recite "change in capability of the encoder to encode at the improved quality relates to filling an out buffer in the encoder" which is not support by the specification. The specification describes frame buffer 104 and encoder 109 reads the computer frame buffer 104 (page 5, paragraph 2). However, the specification does not describes "change in capability of the encoder to encode at the improved quality relates to filling an out buffer in the encoder" as recited in the claims.

Claims 167, 171, 175, 179 recite, "wherein the change in capability of the encoder to encode at the improved quality relates to an output buffer threshold in the encoder". However, support for this limitation is not found in the specification of the application.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 148-164, 177-180 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 148-164 recites "a computer readable medium encoded with computer executable instruction operable in a set-top terminal (STT) to:" does not necessarily define structural and functional interrelationships between the data structure and the

computer software and hardware components which permit the data structure's functionality to be realized, and is thus non-statutory (see M.P.E.P 2106.01 and discussed in "Response to Arguments" above).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-16, 165-168 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al. (US 20050028208 – hereinafter referred as E208) in view of Miura et al. (US 6,996,837 B1), Rakib et al. (US 2004/0172658 A1), Brookes et al. (US 7,114,174), and further in view of Kato et al. (US 6,188,700).

Note: US 20050251827 (referred as E827) and US 2005/0262542 A1 (referred as DeWeese) are incorporated by reference in their entirety in E208 (see E208, paragraphs 0087, 0179, 0227). All the applications incorporated by references in their entirety in E208 are treated as part of the specification of E208.

Regarding claim 1, E208 discloses a master set top terminal (STT) (interpreted as primary user television equipment or local server connected to multiple secondary user television equipments and remote access device 24— see include, but are not limited to, figures 3-5, 29, 31, paragraph, 0194; E827: paragraph 0072—Note: since E208 discloses the remote access device may be connected via remote access link 19 to one of the guides (user television equipments) – paragraph 0087, the examiner interprets the remote access device is connected to primary user television equipment/guide), comprising:

a first tuner, configured to receive a first user input via a first interface, the first tuner further configured to, in response to receiving the first user input, tune to a television signal from a received multiplexed signal into a first tuned television signal (interpreted as a tuner in set top box at primary user television equipment, configured to receive a first user including tuning to a channel via user input device 52 of the remote access device, and configured to, in response to receiving the channel selection input from the user input device 52 of a remote access device, tune to a television signal associated with the selected channel from the signal received over communication network 20 into a first tuned television signal – see include, but are not limited to, figures 2a, 2c, 3-5, paragraphs 0130, 0134, 0138; wherein “received multiplexed signal” is interpreted as signal received over communication path comprises plurality of components such as video, audio, program guide data, etc. – see include, but are not limited to, paragraphs 0068-0069);

a second tuner, configured to receive a second user input via a second interface, the second tuner further configured to, in response to receiving the second user input, tune the television signal from the received multiplexed signal, into a second tuned television signal (e.g., tuner in the set top box at the primary television equipment, configured to receive user input including channel selection, volume control, etc. via user interface such as user input device at the primary user television equipment, and the tuner, in response to receiving user selection of a channel, tune the television signal from the signal received over communication network, into a second tuned television signal correspond to television program/channel selected by the user at the primary television equipment – see include, but are not limited to, figures 2-3,29,31, paragraphs 0080-0081, 0089, 0187-0188, wherein “received multiplexed signal” is interpreted as signal received over communication path comprises plurality of components such as video, audio, program guide data, etc. – see include, but are not limited to, paragraphs 0068-0069), the second tuner is configured for providing at least one tuned signal for display at a second viewing device, the second viewing device being co-located with the master STT (interpreted as the tuner at the primary television equipment, in response to receiving channel selection via the user interface at the primary television equipment, providing at least one of the selected signal for display on television being located at the primary television equipment – see include, but are not limited to, figures 3-4, 29, 31, paragraphs 0080-0081, 0089, 0187-0188);

a receiver configured to receive a first control signal from the remote STT corresponding to a first user input (e.g., communication device configured to receive

control signal such as channel change, volume change, etc. from the remote access device corresponding to a user input to change channel, to change volume, to select a channel to tune to, etc. – see include, but are not limited to, figures 4-5, 29, 31, paragraphs 0071-0072, 0134, 0138);

E208 further discloses the control circuitry in the set top box, in response to signal received from user interface, to perform the corresponding function. The signal received from user interface including channel change, volume change, etc.; and the currently tuned channel is encoded and transmitted to the remote access device for display on the display device at the remote site (see include, but are not limited to, figures 4, 29, 31, paragraphs 0086-0087, 0089-0090, 0134, 0138, 0164, 0170). Thus, a controller (e.g., control circuitry in primary television equipment) coupled to the receiver (e.g., communication device 51 or 27) and configured to accept the first control signal from the receiver (e.g., accept channel change signal received from communication device), the controller further configured to instruct the first tuner to tune to a second tuned television signal in response to the first control signal (e.g., control circuitry configured to instruct the tuner to change the television signal being tuned in response to channel change signal). As a result tuning to another channel in response to channel change signal, the transmitter transmits an encoding of the second tuned television signal to the remote STT (e.g. remote access device) for display on the first viewing device (display device at the remote location);

E208 further discloses the second viewing device (e.g. television display at the primary television equipment) being different than the first viewing device (e.g., display device at remote location – see include, but are not limited to, figures 3-5, 29,31).

E208 further discloses a transmitter configured to transmit the encoded signal to a remote STT to be displayed on a first viewing device, wherein the transmitter is further configured to transmit the first encoded signal substantially simultaneously with a second encoded signal (e.g., a transmitter at the primary or server transmitted first encoded signal (e.g., MPEG-2) substantially simultaneously with a second encoded signal (e.g., MPEG-2) to multiple user television equipments (e.g., movie on TNT channel to user television equipment at Master location, "KEENEN + KEL" on NICK channel to user television equipment at Children's room - see include, but are not limited to, paragraph 0164, 0170; E827: figure 19, paragraph 0101-0104).

E208 further discloses if the program is recorded by remote program guide access device, the programming, may, for example, be digitized and transmitted as a MPEG-2 data stream over remote access remote access link 19 using access communications (see include, but are not limited to, paragraph 0164). The remote access device further comprises a suitable monitor, LCD, or other suitable display device for display the selected video – see include, but are not limited to, paragraphs 0092, 0170).

However, E208 does not explicitly disclose an encoder supporting a plurality of encoding formats and coupled to the first tuner and configured to receive the first tuned

television signal, the encoder further configured to digitally encode the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality; and a transmitter coupled to the encoder configured to transmit the encoded signal to the remote device, the first encoded signal being encoded in a different format than the second encoded signal; the second tuner is configured as a dedicated tuner for providing at least one tuned signal for display at a second viewing device, a Radio Frequency driver coupled to the second tuner, the RF driver configured to facilitate transmission of an independent signal to second viewing device.

Miura discloses a system comprising master set top terminal (STT) – interpreted as master terminal 1, and a remote STT (slave terminal), the master STT comprises first tuner (TA), configured to receive a first user input via a first interface (e.g., user interface 2A), and second tuner (TB), configured to receive a second user input via second interface (user input via user interface 1A), wherein the second tuner is configured as a dedicated tuner for providing at least one tuned signal for display at a second viewing device, the second viewing device being co-located with the master STT (interpreted as tuner TA is configured for providing at least one tuned signal for display at TV 3, the TV 3 being connected with the master terminal (see include, but are

not limited to, figures 1-3, col. 1, line 43-col. 2, line 16, col. 5, lines 17-31); a Radio Frequency driver coupled to the second tuner the RF driver configured to facilitate transmission of an independent signal to the second viewing device (interpreted microcontroller, with various components, coupled to second tuner TB, configured to control the tuners to tune to different signal simultaneously and therefore, an signal tuned by tuner TB is independently transmitted to viewing device at the slave terminal (e.g., TV 5), the second viewing device being different than the first viewing device (TV receiver 3 being different than TV receiver 5) – see include, but are not limited to, figures 1-3, col. 1, lines 36-63, col. 2, lines 3-22, col. 4, lines 1-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify E208 with the teaching as taught by Miura in order to yield predictable results such as to reduce cost for slave terminal and/or allow multiple users tuning to different programs without interfering each other.

However, E208 in view of Miura does not explicitly disclose an encoder supporting a plurality of encoding formats and coupled to the first tuner and configured to receive the first tuned television signal, the encoder further configured to digitally encode the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved wherein the parameter change is responsive to a change in capability

of the encoder to encode at the improved quality; and a transmitter coupled to the encoder configured to transmit the encoded signal to the remote device, the first encoded signal being encoded in a different format than the second encoded signal.

Rakib discloses an encoder coupled to first tuner and configured to receive the first tuned television signal, the encoder further configured to digitally encode the first tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats (e.g., MPEG encoder 147/transcoder coupled to a tuner for receiving television signal from cable communication 10 or satellite feed 12 and transcodes the received format signal to another format for transmitting over LAN-see include, but are not limited to, figures 4a-4b, paragraphs 0123, 0138); and a transmitter coupled to the encoder configured to transmit the encoded signal to the remote device (any device that coupled to MPEG2 encoder/transcoder for providing the signal to a remote device - see include, but are not limited to, figures 4a-5), the first encoded signal being encoded in a different format than the second encoded signal (e.g., signal received by tuner 100 or 180 are transmitted in MPEG-2 format, while the signal such as VOD signal received by tuner 102, 344 is transcoded to a different bit rate, or to encrypt using public key, or to transmitted in fast forward version, slow motion, etc. (see include, but are not limited to, figures 4a-5, paragraphs 0122-0125, 0129-0131, 0137-0138, 0237-0239). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify E208 in view of Miura with the teaching as taught by Rakib in order to yield predictable results such as

to provide a bit rate that is suitable for current loading condition (paragraph 0237) or to provide desire format suitable for display on particular device.

E208 in view of Miura and Rakib does not explicitly disclose encoder supporting a plurality of encoding format and operable in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality.

Brooks discloses an encoder supporting a plurality of encoding formats (MPEG format, H.263 format, Windows Media format, etc. - see include, but are not limited to, col. 9, line 55-col. 10, line 15, col. 14, lines 41-65), the encoder further configured to digitally encode the first television signal having one of the encoding formats into an encoded signal having another one of the encoding formats (see include, but are not limited to, figures 1, 4, 6b, col. col. 9, line 20-col. 10, line 15), and further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved (see include, but are not limited to, figures 1, 4, 6b, col. 9, line 20-col. 10, line 67, automatically change the parameter using computer executable instructions or computer program). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to modify E208 in view of Miura and Rakib with

the teaching as taught by Brooks in order to yield a predictable results such as to providing requesting device with media in the format and performance appropriate and/or requested for the requesting device (col. 3, lines 1-4) thereby improve quality of image displaying on different types of devices.

Brooks further discloses transcoder including encoder changes parameters using Cropper, DCT subsampler, Frame rate adjuster, Color Depth reducer, Bitrate Control, Encoder, etc. to improve quality of image (see include, but are not limited to, figure 4, col. 10, lines 52-67, col. 12, line 1-col. 14, line 65). However, Brooks is silent about parameter change is responsive to a change in capability of the encoder to encode at the improved quality.

Kato, in an analogous art, discloses an encoder is configured to automatically change a parameter wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality (change in frame rate, output bit rate control, etc. is responsive to a change in capability such as bit rate, frame rate, start time, etc. of the encoder to encode at the improved quality - see include, but are not limited to, figures 7, 10, col. 10, line 5-col. 11, line 20, col. 15, line 33-col. 16, line 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify E208 in view of Miura and Rakib and Brooks with the teaching as taught by Kato in order to yield predictable results such as to prevent overflow or underflow of the decoder buffer of the decoder system in case digital signals are encoded and

transmitted at variable bit rate (col. 7, lines 55-62) or stable picture reproduction is enabled without causing overflow or underflow on the side of decoder (col. 9, lines 17-19).

Regarding claims 2-3, E208 in view of Miura and Rakib and Brooks and Kato teaches a "master STT" as discussed in the rejection of claim 1. Neither the reference explicitly disclose the changed encoded signal is displayed at the first viewing device within two seconds from the remote STT receiving the user input, the changed encoded signal is displayed at the first viewing device within a half second from the remote STT receiving the user input. However, E208 further discloses the in response to user input receiving at the remote access device, the encoded signal associated with the changed channel is transmitted and for display on display device at the remote location (see include, but are not limited to, paragraphs 0134, 0138, 0143, 0164). One skilled in the art can select any delay time period to display the encoded signal at the first receiving device (e.g., display device at remote access device) as desired by the user but limited to the capability and characteristics of the transmission medium and devices communicating on the medium between the devices. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include in E208 in view of Miura and Rakib and Brooks and Kato the time period within two seconds, within a half-second as desired by the user but limited to the capability and/or characteristics of the transmission medium and devices communicating on the medium in order to yield a predictable results.

Regarding claim 4, E208 in view of Miura, Rakib and Brooks and Kato discloses the master STT at discussed in the rejection of claim 3. E208 further discloses "wherein transmitter and receiver operate according to a wireline standard selected from at least one of the following: HomePlug and HomePNA (e.g., the communication device/transceiver is operate according to a wireline standard such as power line, or telephone line – see include, but are not limited to, E208: paragraphs 0086, 0087, 0094, 0194).

Regarding claim 5, E208 in view of Miura, Rakib, and Brooks, and Kato discloses the master STT at discussed in the rejection of claim 2. E208 further discloses communication device may be, for example, a communication port (e.g., a serial, parallel port, USB port, etc.), modem (e.g., any suitable analog or digital modem, cellular modem, or cable modem), network interface card, wireless transceiver (e.g., an infrared transceiver or other suitable transceiver), or other suitable communication device (paragraph 0076); remote access link 19 may include any suitable transmission medium. Link 19 may include, for example, a computer network or internet link, an in home network link, an infrared link, a radio frequency link, a satellite link, any other suitable transmission link or suitable combination of such links (see include, but are not limited to, paragraph 0094). It would have been obvious to one of ordinary skill in the art that the transmitter and receiver operate according to a wireless standard selected from at least one of the following: IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, Bluetooth

2.0, HomeRF 2.0, HiperLAN/2, and Ultra-Wideband standards in order to yield a predictable result.

Regarding claim 6, E208 in view of Miura Rakib, and Brooks, and Kato discloses the master STT at discussed in the rejection of claim 5. E208 further discloses the video encoder uses a form of digital compression (digitizes and transmits video as MPEG-2 data stream – see include, but is not limited to, paragraph 0164). Brooks also discloses the video encoder uses a form of digital compression (col. 9, line 55-col. 10, line 15).

Regarding claim 7, E208 in view of Miura Rakib, and Brooks, and Kato discloses the master STT at discussed in the rejection of claim 2. E208 discloses remote access device may, for example, run a standard remote access client such as a Windows (paragraph 0096). The functions of control circuitry in television equipment may be integrated into an advanced television receiver, personal computer television (PC/TV), or any other suitable arrangement (paragraph 0088). Remote access device may be any suitable personal computer (PC), portable computer (e.g., a notebook computer), PDA, etc. (paragraph 0092). Non-program guide application such as chat application may be implemented on a set top box. Chat application services that allow users to exchange chat messages with other users in real time; and the video, including real time video are played on the viewing display including a computer (see include, but are not limited to, paragraph 0179, DeWeese: figures 9, 14, 16). Therefore, video encoder is selected from at least one of Microsoft NetMeeting, Windows Media Player, and Real

Player in order to yield predictable results (e.g. Real Player for playing real chat audio, real chat video).

Brooks also discloses the video encoder is selected from the group consisting of Microsoft Meeting, Windows media Player, and Real Player (see include, but are not limited to, col. 9, line 38-col. 10, line 15).

Regarding claims 8-9, E208 in view of Miura, Rakib, and Brooks, and Kato discloses a "master STT" as discussed in the rejection of claim 6. E208 further discloses encoding the signal into MPEG-2 or any format suitable for transmission over communications link between the primary user television and remote access device/or secondary user television equipments – see include, but are not limited to, figures 2-6c, 29, 31, paragraphs 0127, 0135, 0164.

Brooks further discloses the low latency between the reception of the control signal and the transmission of the changed television is achieved by immediately encoding and transmitting a lower quality video signal (interpreted as when the command is passed to the controller for processing, encoding and transmitting data in default format (e.g., low bandwidth, low bit rate, low frame rate, gray scale image, etc.) while determining the desired bandwidth, format - see include, but are not limited to, col. 10, lines 53-62), the higher quality video signal is transmitted after a period during which the lower quality video signal is transmitted (desired format of the video signal is transmitted once the desired format/parameter is desired, which is after period during

the default format video signal is transmitted - see include, but are not limited to, col. 10, lines 53-62).

Regarding claim 10, E208 in view of Miura, Rakib, and Brooks, and Kato teaches a "master STT" as discussed in the rejection of claim 9. Brooks further discloses the period of lower quality video transmission allows the higher quality video signal to be encoded for transmission (the period of default format of video transmission allows the desired bandwidth, format and other parameters to be determined and encoding desired format of video signal for transmission - see include, but are not limited to, col. 10, lines 53-67).

Regarding claim 11, E208 in view of Miura, Rakib, and Brooks, and Kato teaches a "master STT" as discussed in the rejection of claim 9. E208 and Brooks further disclose encoding format is at least one of H.263, MPEG1, MPEG 2 (see E208, paragraphs 0127, 0135, 0164; Brooks: col. 9, line 55-col. 10, line 15).

Regarding claim 12, E208 in view of Miura, Rakib, and Brooks, and Kato teaches a "master STT" as discussed in the rejection of claim 11. E208 and Brooks further disclose encoding format is low bit rate MPEG-2 and at least one of H.263, MPEG1, MPEG 2, MPEG 4 (see E208, paragraphs 0127, 0135, 0164; Brooks: col. 9, line 55-col. 10, line 15, col. 15, lines 45-57).

Regarding claim 13, E208 in view of Miura, Rakib, and Brooks, and Kato teaches a "master STT" as discussed in the rejection of claim 11. E208 and Brooks further disclose encoding format is H263 and at least one MPEG1, MPEG 2, MPEG 4 (see E208, paragraphs 0127, 0135, 0164; Brooks: col. 9, line 55-col. 10, line 15, col. 15, lines 45-57).

Regarding claim 14, E208 in view of Miura, Rakib, and Brooks, and Kato teaches a "master STT" as discussed in the rejection of claim 11 Brooks further disclose encoding parameter enabling the remote device to decode the transmitted signal using multiple decoding algorithms according to the encoding parameters (see include, but are not limited to, Brooks: col. 9, line 39-col. 10, line 15, col. 10, lines 56-67, col. 14, lines 41-65, col. 15, lines 45-57, col. 17, lines 3-21).

Regarding claim 15, E208 in view of Miura Rakib, and Brooks, and Kato discloses a "master STT" as discussed in the rejection of claim 1. E208 further discloses the received multiplexed signal further comprises a program information component (e.g. video data, voice data, program guide information, etc. – see include, but are not limited to, paragraphs 0068-0069).

E208 further discloses a master STT comprises program guide generator configured to receive the program information from the received multiplexed signal and configured to generate a program guide therefrom that is transmitted by the transmitter upon a user request for the program guide at the remote STT (the user television equipment

comprises control circuitry and other components configured to receive program guide information from main facility and/or television facility in the signal received over communication path 20 and configured to generate a program guide therefrom that is transmitted by the transmitter over link 19 upon a user request for the program guide at the remote access device— see include, but not limited to, figures 2a-2d, 6a-8, paragraphs 0067-0069, 0079, 0082 0102, 0109-0110).

Regarding claim 16, E208 in view of Miura and Rakib, and Brooks, and Kato discloses a "master STT" as discussed in the rejection of claim 1. E208 further discloses the "master STT" comprises an Internet connection (e.g. primary television equipment comprises modem connected to Internet – see include, but are not limited to, paragraphs 0079, 0086, 0090, 0093-0094), and the transmitter is capable of transmitting content derived from the Internet connection to the remote STT (the transmitter in television equipment is capable of transmitting content such as program guide data, chat, email, etc. from Internet to the remote access device – see include, but are not limited to, paragraphs 0079, 0086, 0090, 0093-0094, 0097-0101, 0105, 0148).

Regarding claims 165-168, E208 in view of Miura, Rakib, and Brooks, and Kato discloses the "master STT" as discussed in the rejection of claim 1. Kato further discloses the change in capability of the encoder to encode at the improved quality relates to buffering of the tuned television signal, relates to filling an output buffer in the

encoder, relates to an output buffer threshold in the encoder (e.g., using buffer 73 or buffer 110), and relates to a rate of encoding (see include, but are not limited to, figures 7, 10).

11. Claims 114-164, 169-180 are rejected under 35 U.S.C. 103(a) as being unpatentable over E208 in view of Brooks, and Kato.

Regarding claim 114, E208 discloses a master set top terminal (STT) (interpreted as primary user television equipment or local server connected to multiple secondary user television equipments and remote access device 24— see include, but are not limited to, figures 3-5, 29, 31, paragraph, 0194; E827: paragraph 0072—Note: since E208 discloses the remote access device may be connected via remote access link 19 to one of the guides (user television equipments) – paragraph 0087, the examiner interprets the remote access device is connected to primary user television equipment/guide), comprising:

a tuner configured to tune to a television signal from a received multiplexed signal into a first tuned television signal (interpreted as a tuner in set top box at primary user television equipment, configured to receive a first user including tuning to a channel via user input device 52 of the remote access device, and configured to, in response to receiving the channel selection input from the user input device 52 of a remote access device, tune to a television signal associated with the selected channel from the signal received over communication network 20 into a first tuned television

signal – see include, but are not limited to, figures 2a, 2c, 3-5, paragraphs 0130, 0134, 0138; wherein “received multiplexed signal” is interpreted as signal received over communication path comprises plurality of components such as video, audio, program guide data, etc. – see include, but are not limited to, paragraphs 0068-0069);

encoder for encoding signal (see include, but are not limited to, paragraphs 0127, 0135, 0164, 0194);

E208 further discloses a transmitter configured to transmit the encoded signal to a remote STT to be displayed on a viewing device, (e.g., a transmitter at the primary or server transmits encoded signal (e.g., MPEG-2) one or more user television equipments/remote access device (e.g., movie on TNT channel to user television equipment at Master location, “KEENEN + KEL” on NICK channel to user television equipment at Children's room - see include, but are not limited to, paragraph 0164, 0170; E827: figure 19, paragraph 0101-0104).

E208 further discloses the control circuitry in the set top box, in response to signal received from user interface, to perform the corresponding function. The signal received from user interface including channel change, volume change, etc.; and the currently tuned channel is encoded and transmitted to the remote access device for display on the display device at the remote site (see include, but are not limited to, figures 4, 29, 31, paragraphs 0086-0087, 0089-0090, 0134, 0138, 0164, 0170). Thus, a controller (e.g., control circuitry in primary television equipment) configured to accept a control signal corresponding to a user input at the STT (e.g., accept channel change signal received from communication device at the set top box), the controller further

configured to instruct the tuner to tune to a second tuned television signal in response to the control signal (e.g., control circuitry configured to instruct the tuner to change the television signal being tuned in response to channel change signal). As a result tuning to another channel in response to channel change signal, the transmitter transmits an encoding of the second tuned television signal to the remote STT (e.g. remote access device) for display on the viewing device (display device at the remote location);

E208 further discloses the second viewing device (e.g. television display at the primary television equipment) being different than the first viewing device (e.g., display device at remote location – see include, but are not limited to, figures 3-5, 29,31).

However, E208 does not explicitly disclose an encoder supporting a plurality of encoding formats and configured to digitally encode the tuned television signal having one of the encoding formats into an encoded signal having another one of the encoding formats, and further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality.

Brooks discloses an encoder supporting a plurality of encoding formats (MPEG format, H.263 format, Windows Media format, etc. - see include, but are not limited to, col. 9, line 55-col. 10, line 15, col. 14, lines 41-65), the encoder further configured to digitally

encode the first television signal having one of the encoding formats into an encoded signal having another one of the encoding formats (see include, but are not limited to, figures 1, 4, 6b, col. 9, line 20-col. 10, line 15), and further configured to operate in accordance with a parameter describing quality of the encoded signal, and further configured to automatically change the parameter such that the quality of the encoded signal is improved (see include, but are not limited to, figures 1, 4, 6b, col. 9, line 20-col. 10, line 67, automatically change the parameter using computer executable instructions or computer program). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention as made to modify E208 with the teaching as taught by Brooks in order to yield a predictable results such as to providing requesting device with media in the format and performance appropriate and/or requested for the requesting device (col. 3, lines 1-4) thereby improve quality of image displaying on different types of devices.

Brooks further discloses transcoder including encoder changes parameters using Cropper, DCT subsampler, Frame rate adjuster, Color Depth reducer, Bitrate Control, Encoder, etc. to improve quality of image (see include, but are not limited to, figure 4, col. 10, lines 52-67, col. 12, line 1-col. 14, line 65). However, Brooks is silent about parameter change is responsive to a change in capability of the encoder to encode at the improved quality.

Kato, in an analogous art, discloses an encoder is configured to automatically change a parameter wherein the parameter change is responsive to a change in capability of the encoder to encode at the improved quality (change in frame rate, output bit rate control, etc. is responsive to a change in capability such as bit rate, frame rate, start time, etc. of the encoder to encode at the improved quality - see include, but are not limited to, figures 7, 10, col. 10, line 5-col. 11, line 20, col. 15, line 33-col. 16, line 19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify E208 in view of Brooks with the teaching as taught by Kato in order to yield predictable results such as to prevent overflow or underflow of the decoder buffer of the decoder system in case digital signals are encoded and transmitted at variable bit rate (col. 7, lines 55-62) or stable picture reproduction is enabled without causing overflow or underflow on the side of decoder (col. 9, lines 17-19).

Regarding claim 115, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further discloses the teaching of transmitter configured to transmit a decode parameter indicative of the changed parameter (e.g., information associated with the stream of input video data and/or format of output stream - see include, but are not limited to, Brooks: col. 9, line 38-col. 10, line 65, col. 14, lines 41-65, col. 17, lines 9-21).

Regarding claim 116, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 115. E208 in view of Brooks and Kato further

discloses the decode parameter is conveyed in a packet header (see include, but are not limited to, Brooks: col. 9, line 38-col. 10, line 15, col. 14, lines 41-56, **col. 17, lines 9-21**).

Regarding claim 117, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 115. E208 further discloses the teaching of transmitting program guide information and other data using out of band data packet (see include, but is not limited to, paragraph 0069). Brooks discloses encoding parameter is conveyed in the packet as discussed in the rejection of claim 115. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of decoding parameter/hints/ information is conveyed in out of band packet in order to yield predictable result such as to provide an alternately way for transmitting decoding information.

Regarding claim 118, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 115. E208 in view of Brooks and Kato further discloses transmission of the decode parameter and transmission of a predetermined bit pattern (e.g., bit pattern of particular format of the video data - see include, but are not limited to, Brooks: col. 9, line 39-col. 10, line 67, col. 17, lines 9-21). Official Notice is taken that transmitting decode parameter preceded by transmitting of program content with particular format is well-known in the art. For example, the program encoded and transmitted in a predetermined bit pattern to the receiving device before

the decode parameter such as decryption key, encode type, or other information for decoding the program is transmitted. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify E208 in view of Brooks with the well-known teaching in the art in order to yield predictable results such as to improve security in program accessing/decoding.

Regarding claim 119, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further discloses transmitting the encoded signal simultaneously with the television signal having one of the encoded formats (e.g., data associated with input video signal derived from the input video data itself - see include, but are not limited to, col. 9, line 39-col. 10, line 67, col. 17, lines 9-21).

Regarding claim 120, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further discloses the one of the encoding formats and the another one of the encoding formats differ in bit rate (e.g., H. 263 format, MPEG 1 format, etc. – see include, but are not limited to, Brooks: col. 9, line 39-col. 10, line 67).

Regarding claim 121, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further discloses the one of the encoding formats and the another one of the encoding formats

conform to a common standard (e.g., MPEG) but differ in bit rate (e.g., MPEG 1, MPEG 2, MPEG 4 – see include, but are not limited to, Brooks: col. 9, line 39-col. 10, line 67).

Regarding claim 122, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further discloses the encoder is configured to operate in accordance with a parameter (e.g., bandwidth, bit rate, format, etc.) describing quality of the encoded signal and wherein the encoder is further configured to change the parameter (e.g., change from default format to desired format) after a time period (e.g., time take to determine the desired bandwidth, desired format, etc.) such that the quality of the encoded signal is improved (see include, but are not limited to, Brooks: col. 10, lines 52-62).

Regarding claim 123, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further discloses the encoder is configured to operate in accordance with a parameter (e.g., bandwidth, bit rate, format, etc.) describing quality of the encoded signal and wherein the encoder is further configured to maintain the parameter over time to maintain the quality of the encoded signal (e.g., maintain encoding accordance to desired bandwidth, desired format, etc. see include, but are not limited to, Brooks: col. 10, lines 1-55).

Regarding claims 124-125, E208 in view of Brooks and Kato discloses the master STT at discussed in the rejection of claim 114. E208 in view of Brooks and Kato further

discloses the television signal is an analog modulated signal, a digitally modulated signal (see include, but are not limited to, E208: paragraphs 0076-0077, 0082-0083, 0127, 0135; Brooks: col. 6, lines 11-27, col. 9, lines 20-67).

Regarding claims 126-130, the additional limitations correspond to the additional limitations of claims 4-5, 11-13 and are analyzed as discussed in the rejections of claims 4-5, 11-13.

Regarding claims 131-147, the limitations of the method that correspond to the limitations of the master STT in claims 114-130 are analyzed as discussed in the rejection of claims 114-130.

Claim 148-164 are directed toward embody the method of claims 131-147 in "computer readable medium". It would have been obvious to embody the procedures of E208 in view of Brooks and Kato discussed with respect to claims 131-147 in a "computer readable medium" in order that the instructions could be automatically performed by a processor.

Regarding claims 169-180, Kato further discloses the change in capability of the encoder to encode at the improved quality relates to buffering of the tuned television signal, relates to filling an output buffer in the encoder, relates to an output buffer

threshold in the encoder (e.g., using buffer 73 or buffer 110), and relates to a rate of encoding (see include, but are not limited to, figures 7, 10).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ran (US 5,768,533) discloses video coding using segmented frames and retransmission to overcome channel errors.

Van der Schaar et al. (US 6,788,740 B1) discloses system and method for encoding and decoding enhancement layer data using base layer quantization data.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SON P. HUYNH whose telephone number is (571)272-7295. The examiner can normally be reached on 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Son P Huynh/
Primary Examiner, Art Unit 2424

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